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# Developing the Personalized System of Instruction for the Basic Speech Communication Course

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The purpose of this article is to discuss major planning and development decisions required in order to use the Personalized System of Instruction (PSI) method in the basic speech communication course. In this article we examine: (1) how major PSI components are implemented and (2) how the PSI course is managed. By documenting the decisions required to use PSI in speech communication courses which include performances, we hope to provide helpful guidelines for those interested in applying the PSI method to their basic speech communication courses.

## Implementing PSI Components in the Basic Speech Communication Course

Before PSI components can be implemented in a speech communication course several preliminary considerations must be taken into account. The general objectives of the course must first be decided. For example, our course is a hybrid basic course which includes both public speaking and communication theory. The basic objective of the course is to provide students with both an understanding of communication theory and opportunity to improve communication skills. This objective provides the basis for choosing what to teach in the course. In our course development, we decided to include the following content areas: introduction to communication, relational communication, small group communication, listening, nonverbal communication, language usage, and public speaking. Each of

these content areas became individual units of instruction except for public speaking which was divided into two units. Thus, our course consisted of eight units of instruction.

The decision on content areas provided the framework for implementing of the PSI method. The main features of the PSI method originally identified by Keller are: (1) mastery (students must meet a criterion level before proceeding to new material); (2) self-pacing; (3) emphasis upon the written word; (4) use of lectures and demonstrations for motivation, not as information sources; and (5) use of proctors for tutoring on a personal level, testing, and scoring (Sherman, 1974). Even though these five features are stressed, adaptations of PSI have been very effective as long as individualized instruction, highly personalized relationships, and the basic learning (reinforcement) theory are retained (Boylan, 1980). Thus, decisions must be made to include and/or modify each of the five features.

### *Mastery*

Although mastery is considered an essential component of the PSI method, Keller does not imply that all aspects of the course must include it. Mastery is interpreted to mean perfection, or as Keller originally defined it, as achieving 100% on quizzes (Keller, 1968). In PSI, success is rewarded and errors are not punished, a method that allows students more than one opportunity to successfully reach mastery or specific grade level.

In typical PSI taught courses, students demonstrate content mastery through multiple test-taking procedures. We made our testing decision based upon a model we observed in a human development course under the direction of George Semb at the University of Kansas. Our course uses three levels of testing: the unit quiz, the review test, and the final exam. Each type of test is designed to provide maximum learning. Every quiz, test, or exam item corresponds to a learning objective and to the specific reading materials pertaining to the learning objective. In line with the PSI concept of correcting rather than punishing mistakes, students are allowed to retake quizzes, tests, or exams. This policy requires multiple forms of each. To fulfill this large demand, we adopted a procedure in which the quizzes, tests, and exams are computer generated from an extensive bank of items. A multiple-choice format was chosen as the main type of question because the format is reliable and easy to evaluate. We also made an effort to include questions that cover low as well as high cognitive levels. Because it is also important to test students' ability to evaluate and synthesize information, we included some short-answer essay questions.<sup>1</sup>

Using Semb's model, we designed our quizzes to test students on the individual units of instruction. Students must get 100% of the items correct on each unit quiz in order to move onto the next unit of instruction or to the review exam. If they miss a small percentage (15% or less) of the questions they are required to restudy the unit content corresponding to the questions missed and to rewrite their answers until they are correct. If students miss more than 15% of the questions on the quiz they are required to retake another quiz. The retake quiz consists of questions randomly selected from the same pool of questions. Students may skip unit quizzes or not complete them with mastery, but for each one skipped or not completed ten points is taken off their accumulated score at the end of the semester.

Review tests are given: after the completion of Units I–III, after Units IV–VI, and after Units VII–VIII. Each review test consists of thirty randomly selected multiple-choice questions drawn from the pool of quiz questions. Students may choose to improve their review test scores by retaking the test. The highest score obtained on a review test is the one which counts toward the final grade in the course. After students complete review test III they are eligible to take the final exam.

The final exam consists of 48 multiple-choice questions, randomly chosen from the entire pool of questions representing all the units of instruction (six questions from each unit). A student, if time permits, may take the final exam a second time, and the higher score is used to determine the final grade in the course. The final grade in the course consists of the scores received on the three review tests, the final exam, and speeches. Unit quizzes are used for learning, and because 100% mastery is expected on them they are not included in the final grade.

Addition of the public speaking component which requires performances creates some challenges within the PSI format. Students are allowed to retake speeches in keeping with the PSI philosophy of allowing students to correct mistakes. Speeches are rated using a competency-based evaluation format. Using this evaluation approach requires a carefully determined set of criteria. Each speech is rated as exceptional, acceptable, or unacceptable.<sup>2</sup> These categories are based upon predetermined criteria which are used by all evaluators who are specifically trained in speech evaluation.

### *Self-Pacing*

A second PSI feature, self-pacing, has often been criticized for contributing to a higher dropout rate because some students procrastinate until the end of the course and then become overwhelmed by all they have yet to accomplish (Whaley & Malott, 1971; Miller, Weaver & Semb, 1974; Cross & Semb, 1976; Semb, Glick, & Spencer, 1977).

In comparing two PSI courses, one with deadlines and the other without, Glick and Semb (1978) note that roughly 50% of the students are not affected by either the presence or absence of deadlines. About 40% of the students in both conditions, however, seem to procrastinate to the extent permitted by the pacing schedule. Glick and Semb conclude that instructor-set deadlines are effective in obtaining responses from students who otherwise would procrastinate. Semb suggests certain deadlines for both attempting and passing the first unit, the three review exams, and the final exam. Students may progress more rapidly than the deadlines, but those who fall behind are required to begin daily testing. The rationale for Semb's policy is that students who fall behind the deadlines cannot reasonably expect to complete the course (Semb, 1979).

After deciding to use deadlines in our course, we set *specific* deadlines for the completion of the three speeches; the Unit II quiz; review exams I, II, and III; and the final exam. We adopted Semb's policy that students may work faster than the deadlines but must not fall behind, if they expect to finish the course. We also provide students with recommended deadlines throughout the course to help them pace themselves. We find that modifications of the self-pacing feature are necessary to accommodate our public speaking component. For example, to provide an audience for speeches, certain days are designated as speech performance days.

*Emphasis upon the Written Word*

In the PSI method of instruction, written materials form the primary vehicle for disseminating information. With the self-pacing feature, which depends upon students having continuous access to materials, selecting the proper sources for the course is extremely important. Materials must be well organized, clearly written, and easy to follow; if not available, they have to be written. Once the text is determined and all other materials written, a study guide is developed.<sup>3</sup>

The study guide is very important. It enables students to progress independently through the course units at their own pace. Designing the study guide to meet the objectives for each unit and to allow for individual pacing involved a number of considerations, one of the first being what to include. A PSI study guide generally includes course objectives, unit purpose and objectives, and study questions. Researchers find increased student learning when study questions are added to the study guide (Miles, Kibler, & Pettigrew, 1967; Jenkins & Neisworth, 1973; Semb, Hopkins, & Hursh, 1973). Therefore, we wrote study questions for each unit which carefully follow our general learning objectives and specific objectives.

In organizing the study guide, we felt it important that students clearly recognize how all materials are directly tied to objectives. A system of linking each general learning objective to specific objectives demonstrates the relationship among the general learning objectives for each unit, the several specific objectives that amplify each general learning objective, the study questions for each specific objective, and the pertinent written material. At the end of each unit of study, we include a self-test so the students can determine if they are ready for the unit quiz.

In addition to the objectives, purposes, study questions, and self-test, the study guide contains suggested activities for each unit.<sup>4</sup> These are designed to provide creative application of concepts for students. We further supplement written materials with other resources for motivation and clarification. We have acquired or developed videotapes, films, and simulation exercises to accompany each unit. Sample topics include model speeches, communication apprehension, use of visual aids, and test taking.

*Use of Lectures for Motivation*

The idea of self-pacing is incompatible with an approach requiring attendance at daily lectures. Thus, most lectures and tapes of lectures in PSI courses are supplementary. Teachers who include a public speaking component may wish to make a slight change in this practice. We require attendance at the lecture that is presented before each of the three speech assignments. This decision was made because we felt it was important that students not only receive an oral discussion of the assignment but also have ample opportunity to ask questions about the assignments. We also designate four attendance days at the beginning of the course for orientation, a standard procedure in PSI courses. Taped lectures on a variety of topics as well as model speeches are also available for students to see in our audio-visual lab.

### ***Proctors***

Another major choice to consider is whether to include proctors, usually undergraduates who have already taken the course. Students appreciate personalized interactions with their proctors.<sup>5</sup> In addition, proctoring appears to enhance student achievement (Farmor, et al., 1972). Those who decide to use proctors will need to work out the details of selection and training.

In PSI courses, practices for selecting proctors range from a twenty-minute personal interview where two staff persons rate applicants on knowledge and social skills to those where both an instructor and a current, experienced proctor rate applicants on dependability, knowledge of material, and social skills. Conrad and Semb (1977) compared both approaches and concluded that less extensive selection procedures are just as workable. Based on their simpler guidelines, we recruit proctors, called IAs (instructor assistants), from students who do the best work in class each semester. The experienced proctors rate new applicants on their tutoring and interaction potential. These applicants are then interviewed by the instructor. To date we have had no difficulty obtaining high-quality students to be proctors.<sup>6</sup>

Once selected, proctors prepare for the duties assigned to them—tutoring, grading quizzes and tests, and recording grades. In addition, if the public speaking component is used, proctors also evaluate speeches, a method which requires careful training.

The amount of training required in PSI programs varies widely. For example, in one program, new proctors receive a manual which covers course procedures and then participate in required training sessions. In another program, proctors also complete required study guides, which are checked by an instructor who monitors their performance and randomly regrades a quiz per day as a check for quality control. Evidence shows, however, that less time-consuming training is also effective (Conrad & Semb, 1977).

Our proctors meet for three one-hour meetings at the beginning of the semester and then for weekly one-hour training sessions throughout the semester. Proctors must reach a certain level of competency before they are certified to rate speeches and thereafter receive validity checks on their speech evaluations. The training program is under constant evaluation and is modified to meet the needs of the proctors. The training program includes sessions on record keeping, tutoring, evaluation, professionalism, problem students, and diversity. In a study on the effectiveness of undergraduate PSI raters in our department, encouraging initial results were found (Hanisko, Beall, Prentice, & Seiler, 1983).

In addition to the assigned responsibilities in the course and their training, interns keep journals, write papers, and are graded on their performance. Proctors receive three hours of instructional credit for each semester they participate in our program. A maximum of six credits can be applied to their degree, and if they are speech communication majors only three can apply to the major.

For our PSI basic speech communication course, then, we keep all five main PSI features: mastery, self-pacing, emphasis upon the written word, use of lectures and demonstrations for motivation, and use of proctors. Addition of the public speaking component meant the modifications were necessary in the self-pacing feature.

## Course Management

### *Record Keeping*

Maintaining a PSI course generates a large volume of paper work. Folders containing careful records of students' scores and progress must be kept. Choices need to be made about the contents of the folder (tests, speech evaluations, record sheets, student information, etc.) and who will do the record keeping. The record keeping is done by the undergraduate proctors and reviewed by the graduate student supervisory instructors.<sup>7</sup>

### *Physical Facilities*

The personalized pacing schedule creates multiple activities within the classroom, necessitating decisions about room arrangement or about separate areas for testing, tutoring, and studying (see Figure 1 for classroom diagram). This arrangement, given the physical dimensions of our classrooms, appears to be the most efficient and effective use of the available space.

Figure 1  
ROOM ARRANGEMENT

TEST AREA
STUDY AREA
PROCTOR AREA

### *Scheduling Speeches*

Adding a public speaking component to a PSI course raises a number of scheduling concerns: How many speeches should be presented and how long should they be? Will certain days be designated as speech days? Will students who give speeches have an audience? May students regive speeches? If so, how many attempts will be allowed?

We include three speeches: (1) a 5- to 7-minute informative presentation on a subject of the students' choosing, (2) a 4- to 6-minute informative speech on a subject selected from a departmental file 72 hours before presentation, and (3) a 5- to 7-minute persuasive speech on a sociopolitical issue.

Students sign up to give presentations on a specific date; after an unacceptable rating, a student must present the speech a second time. Two dates for speeches and one retake date are allotted for each speech presentation. If needed, additional dates must be arranged outside the regular class time with the proctor. Because of the nature of the PSI, audience sizes are small, averaging about five people.

### *Policies*

Smooth course management depends upon clearly defined policies, especially those which affect the student. The course overview should contain policies for dealing with deadlines, cheating, quality control, and student evaluation of the course.

### *Deadlines*

Typical questions include: Must students complete the course in a semester? When students fall behind required deadlines, what procedures will be followed? What will happen to students who do not meet suggested deadlines? Our deadline policy requires all students to complete the course by the end of the semester. If students fall behind a recommended deadline they are not penalized but are required to come to class until they get back on schedule. If students choose not to come to class and fall behind in the course they are encouraged to withdraw or told they will probably receive a low or failing grade in the course. Incompletes are given only for justified medical or emergency reasons according to university policy.

### *Cheating*

Policies to be set include: How will cheating be defined? What will constitute questionable behavior and blatant cheating? What penalties will be imposed? We classified two types of cheating behavior: questionable behavior and blatant cheating. Questionable behavior would include leaving the testing area while taking a quiz, test, or exam. Blatant cheating would include looking at another student's test, removing a test from the classroom, or using crib notes. Each type of behavior has a specific penalty. For example, leaving the test area results in a warning and if done a second time five (5) points are taken off the final grade. If a student uses crib notes, the penalty is an automatic failure for the activity the student is working on and no opportunity to make it up. Cheating on a review test or final exam results in an automatic failure in the course.

### *Quality Control*

Areas of concern for proctors and instructors are: Who will check on quality control? How often should it be done? What type of standard rating form will be used? When a proctor's grading does not meet acceptable standards, what steps will be taken? In our program, the supervisory instructors review all files and constantly check to make sure that proctors are doing their job correctly. Four times during the semester a formal check is done on all files.

### *Student Evaluation*

An important question for the course director is: How will students' evaluations of the course and their input toward improving it be encouraged? We use a standardized evaluation form which has the students rate their proctor and the course. In addition, students are asked to provide suggestions on how we can improve the course. A basic premise of PSI courses is that students be involved in their own learning in a way that meets their needs.

### **Conclusion**

There has been no published literature on how to develop a PSI method in a basic speech communication course which includes speech performances. The choices encountered in developing and implementing a basic speech communication course using the PSI method



include: (1) selecting the course objectives, (2) choosing the units, (3) implementing the major PSI components, and (4) managing the course.

Course objectives should be directly related to the philosophical approach taken in the course. Course objectives, as well as needs and resources, help determine the course content. The means of presenting the content is determined by selection/modification of all or some of the main features of the PSI method: mastery, self-pacing, emphasis upon the written word, use of lectures for motivation, and use proctors. In the process of implementing PSI features, directors need to make decisions concerning criteria levels for mastery, type of testing, potential modification of the self-pacing and motivational lecture features to accommodate a public speaking component, study guide design, and proctor selection and testing.

Managing all the details generated by PSI courses requires decisions about record keeping, care of tests, physical facilities, scheduling speeches as well as policies concerning deadlines, cheating, quality control, and student evaluation of the course. In the process of implementing a PSI course, choices should be flexible. In addition, opportunities for feedback from students, proctors, and instructors should be available. Moreover, constant revision is necessary.

## Notes

1. The short-answer essay questions appear only on the quizzes. The reasoning behind this is that we view the quizzes not as tests but as vehicles to help the students learn. Each type of test (quiz, review exam, or final exam) is composed of a random set of items related to the unit or units being tested. The computer not only generates the test (quiz, review exam, or final exam) but also the answer key and the specific learning objective along with the reading that is assigned to the learning objective.
2. Students who receive an *acceptable* rating receive five (5) points toward their final course grade. Receiving an acceptable rating means the minimum standards were met for a passing grade. Students who receive an *exceptional* rating receive ten (10) points toward their final course grade. Receiving an exceptional rating means that the speech was significantly better than just meeting the minimum standards. Students who receive an *unacceptable* rating must present their speech a second time. If they are unable to achieve the acceptable level, they receive zero points toward their final grade. Students who do not present a speech will have 10 points taken off their final grade, and students who do not present two of three speeches will receive an "F" in the course.
3. The study guide was developed with the help of Marilyn Fuss-Reineck, Vicki Nogle, Charles Wilbanks, Arlie Daniel, Sandi Hanisko, Mellissa Beall, and Ruth Kay.
4. In our study guide, all exercises and activities are designed to be done by each student as an individual. It is possible, however, to have exercises that involve groups of students. This may require scheduling of specific class time for such group activities.
5. Data collected from more than two thousand student course evaluations suggest a high degree of student satisfaction with their proctors.
6. Students, who are selected based upon their academic standing, receive three credit hours. They must, however, enroll in an instructional internship course.
7. The record form was developed in part by George Lawson and David Dunning.

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